

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

5 1-96. (Cancelled).

97. (Original) A method for making a polymer material comprising:

(a) derivatizing carbon nanotubes with functional moieties to form derivatized carbon nanotubes, wherein the functional moieties are derivatized to the carbon nanotubes utilizing a 10 diazonium specie;

(b) dispersing the derivatized carbon nanotubes in a polymer.

98. (Original) The method of claim 97, wherein the carbon nanotubes are single-wall carbon nanotubes.

15 99. (Amended) The method of claims claim 97 or 98, wherein the functional moieties are chemically bound to the polymer.

100. (Amended) The method of claims claim 97 or 98, wherein the functional moieties are not 20 chemically bound to the polymer.

101. (Amended) The method of claims claim 97 or 98, wherein the functional moieties are removed after the dispersing step.

25 102. (Original) The method of claim 101, wherein the removal step comprises heating the dispersal of the derivatized carbon nanotubes and the polymer to a temperature at least about 250°C.

103. (Original) The method of claim 101, wherein the removal step comprises heating the dispersal of 30 the derivatized carbon nanotubes and the polymer to a temperature at least about 600°C.

104. (Amended) The method of claims claim 97 or 98, wherein the functional moiety is operable to react with a curing agent.

105. (Amended) The method of claims claim 104, wherein the polymer comprises the curing agent.

106. (Original) The method of claim 104, wherein the curing agent is dispersed in the dispersal of the derivatized carbon nanotubes and the polymer.

5 107. (Amended) The method of claims claim 104, 105, or 106, wherein the curing agent comprises an agent selected from the group consisting of diamines, polymercaptans, and phenol containing materials.

108. (Amended) The method of claims claim 97 or 98, wherein the functional moiety is operable to react with a epoxy portion.

109. (Amended) The method of claims claim 108, wherein the polymer comprises the epoxy portion:

110. (Amended) The method of claims claim 104, 105, 106, 107, 108, or 109 further comprising curing the dispersal of the derivatized carbon nanotubes and the polymer.

15 111. (Original) A polymer material comprising:

(a) derivatized carbon nanotubes, wherein the derivatized carbon nanotubes comprise a diazonium species moiety; and
(b) a polymer, wherein the derivatized carbon nanotubes are dispersed in the polymer.

20 112. (Original) A polymer material comprising:

(a) derivatized carbon nanotubes, wherein the derivatized carbon nanotubes were derivatized utilizing a diazonium species; and
(b) a polymer, wherein the derivatized carbon nanotubes are dispersed in the polymer.

25 113. (Original) A polymer material made by the process comprising:

(a) derivatizing carbon nanotubes with functional moieties to form derivatized carbon nanotubes, wherein the functional moieties are derivatized to the carbon nanotubes utilizing a diazonium specie;
(b) dispersing the derivatized carbon nanotubes in a polymer.

30 114. (Amended) The polymer material of claims claim 111, 112, or 113, wherein the carbon nanotubes are single-wall carbon nanotubes.

35 115. (Amended) The polymer material of claims claim 111, 112, 113, or 114, wherein the functional moieties are chemically bound to the polymer.

116. (Amended) The polymer material of claims claim 111, 112, 113, or 114, wherein the functional moieties are not chemically bound to the polymer.

117. (Amended) The polymer material of claims claim 111, 112, 113, or 114, wherein the functional moiety is operable to react with a curing agent.

118. (Original) The polymer material of claims 117, wherein the polymer comprises the curing agent.

119. (Original) The polymer material of claim 117, wherein the curing agent is dispersed in the dispersal of the derivatized carbon nanotubes and the polymer.

120. (Amended) The polymer material of claims claim 117, 118, or 119, wherein the curing agent comprises an agent selected from the group consisting of diamines, polymercaptans, and phenol containing materials.

121. (Amended) The polymer material of claims claim 111, 112, 113, or 114, wherein the functional moiety is operable to react with a epoxy portion.

122. (Original) The polymer material of claims 121, wherein the polymer comprises the epoxy portion.

123. (Amended) The polymer material of claims claim 117, 118, 119, 120, 121, or 122, wherein the process further comprises curing the dispersal of the derivatized carbon nanotubes and the polymer.

124. (Original) A method for making a polymer material comprising:

25 (a) derivatizing carbon nanotubes with functional groups to form derivatized carbon nanotubes, wherein

(i) the functional groups are derivatized to the carbon nanotubes utilizing a diazonium specie and

(ii) the functional groups are capable of polymerizing; and

30 (b) polymerizing the derivatized carbon nanotubes to grow polymer from the functional groups.

125. (Original) The method of claim 124, wherein the carbon nanotubes are single-wall carbon nanotubes.

126. (Amended) The method of claims claim 124 or 125, wherein the polymerization step comprises a technique selected from the group consisting of radical, cationic, anionic, condensation, ring-opening, methathesis, and ring-opening-metathesis (ROMP) polymerizations.

5 127. (Original) A polymer material made by the process comprising:

- (a) derivatizing carbon nanotubes with functional groups to form derivatized carbon nanotubes, wherein
 - (i) the functional groups are derivatized to the carbon nanotubes utilizing a diazonium specie and;
 - (ii) the functional groups are capable of polymerizing; and
- (b) polymerizing the derivatized carbon nanotubes to grow polymer from the functional groups.

10 128. (Original) The polymer material of claim 127, wherein the carbon nanotubes are single-wall carbon nanotubes.

15 129. (Amended) The polymer material of claims claim 127 or 128, wherein the polymerization step comprises a technique selected from the group consisting of radical, cationic, anionic, condensation, ring-opening, methathesis, and ring-opening-metathesis (ROMP) polymerizations.

20 130. (New) The method of claim 108 further comprising curing the dispersal of the derivatized carbon nanotubes and the polymer.

25 131. (New) The polymer material of claim 111, wherein the carbon nanotubes are single-wall carbon nanotubes.

132. (New) The polymer material of claim 113, wherein the carbon nanotubes are single-wall carbon nanotubes.

30 133. (New) The polymer material of claim 121, wherein the process further comprises curing the dispersal of the derivatized carbon nanotubes and the polymer.